Lessons learnt from developing ESCO projects - performance guarantee & MESA models

Third Energy Efficiency Virtual Workshop
Scaling up Super ESCOs and ESCOs in Africa

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Many ESCO models

2 Main groups (from asset ownership)

**Traditional ownership**

- Asset ownership
- Client's balance sheet
- Debt

**Asset Servitisation**

- Asset ownership
- ESCO/investor Balance sheet
- Service fee
- Asset utilisation rights
- Debt
Many ESCO models

An example of each

- **Financed project**
  - Lender
  - Client
  - ESCO
  - Repayment
  - Funds
  - Performance guarantee
  - Maintenance and M&V
  - Toll / specifications
  - Project payment
  - M&V & maintenance payment

- **MESA model (joint ESCO + investor roles)**
  - Utility
  - ESCO + Investor (may be an SPV)
  - Client
  - Utility payment
  - Energy
  - Asset utilization service
  - Service fee: baseline utility costs minus savings share (if any)

- **MESA model (separate ESCO + investor roles)**
  - Utility
  - Investor (may be an SPV)
  - Client
  - Utility payment
  - Asset utilization service
  - Service fee: baseline utility costs minus savings share (if any)
  - Performance guarantee, maintenance & M&V service
  - Maintenance & M&V payment
Lesson 01

Few people are interested in Energy Efficiency: Don’t sell ESCO projects from that angle

- Executive management focuses on providing value to clients (private) / residents (public):
  
  E.g. Hotel manager wants to attract new clients (comfortable rooms, fancy new lobby, etc...).
  
  Production manager wants to improve product quantity/quality, avoid shutdowns...
  
  Municipal manager wants to be reappointed 😊

- Financial management looks after financial stability of organization: debt issuing is limited.

- Maintenance people may perceive the project as a risk to their job / uncover “skeletons” hidden in the infrastructure

Be creative, keep in mind the incentives of everyone in the organization.
The contract is the only thing that holds over time. People will change.

Include in the contract:

- Baseline, baseline, baseline: (consumption, opening hours, users, list of assets, weather bins, setpoints, lux levels etc.)
- Define the scope of work, asset by asset, separating client and contractor responsibilities.
- Implementation period.
- Guarantee types, baseline adjustments, etc.
- Monitoring, Reporting & Verification (MRV) activities
- Maintenance services.
- Specify quality of fuel / consumables that the client will buy.
Not every model works for every case

For a MESA project to work:
- Large projects with +15% total energy savings.
- Technically & financially savvy ESCOs are needed.
- ESCO must have good control on facility (e.g. facility manager): maintenance, keep track of changes, etc
- Public clients are restricted by procurement and financial management regulations.
- Setup agile payment processes (not fun if utility cuts off energy supply because of payment delays)

For an energy performance model to work:
- Harder to account off-balance sheet (investor needed), or client obtains funding.
- Private clients will want short paybacks (3-4 years)
- Public clients are restricted by procurement and financial management regulations.
A good MRV is like a good insurance

- Everybody wants it until they have to pay for it.
- When you need it, you’ll regret not having a better one.
- You'll need it more often than you think/want.
- Risk of “over-insuring”: IPMVP type C is expensive and is not adequate for most projects.
- Only certain events are insured: ESCO has to comply with obligations, but should monitor to avoid abuse.
Some technical lessons

- Don’t trust the plans/asset lists, etc. Let the ESCO check by themselves before bidding.
- Lighting changes are the first thing people notice (for good and bad).
- Ventilation is expensive: many good projects exist.
- Virtually all chilled water plants can be optimized.
- Energy is still too cheap.
- If a project is designed creatively (see lesson 1), payback period becomes “irrelevant”.

ESCOs are a people’s business: good processes + inadequate people = poor results
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